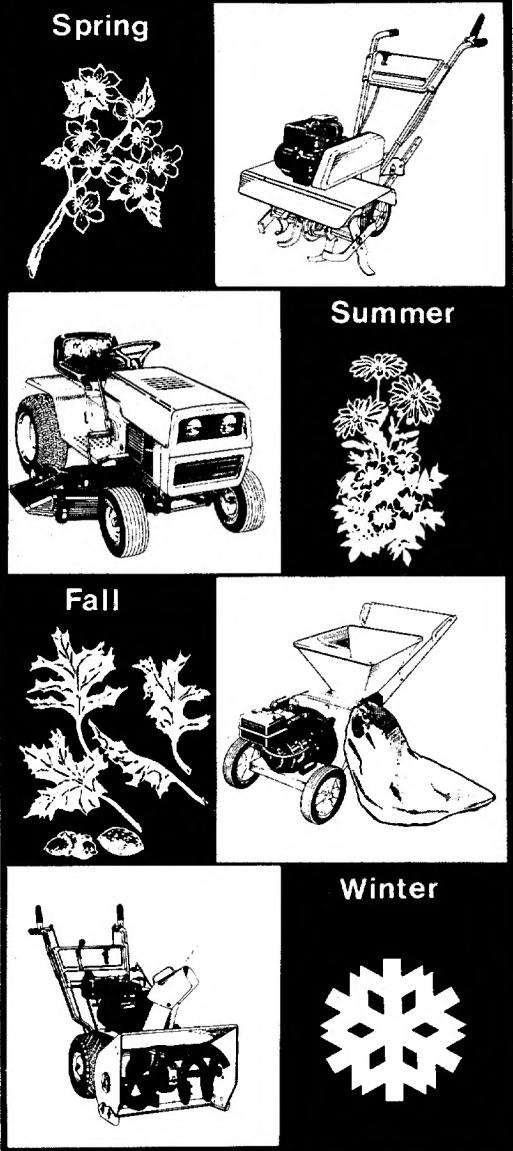


OWNER'S GUIDE

OUTDOOR POWER EQUIPMENT
for all seasons



REAR TINE TILLERS

Model Numbers
216-402-000
216-404-000
216-405-000
GRT5

Important:
**Read Safety Rules and
Instructions Carefully**

Thank you for purchasing
an American-built product.

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Instructions given with this symbol are for personal safety. Be sure to follow them.

LIMITED WARRANTY

For one year from the date of original retail purchase, MTD PRODUCTS INC will either repair or replace, at its option, free of charge, F.O.B. factory or authorized service firm, any part or parts found to be defective in material or workmanship. Transportation charges for the movement of any power equipment unit or attachment are the responsibility of the purchaser. Transportation charges for any parts submitted for replacement under this warranty must be paid by the purchaser unless such return is requested by MTD PRODUCTS INC.

This warranty will not apply to any part which has become inoperative due to misuse, excessive use, accident, neglect, improper maintenance, alterations, or unless the unit has been operated and maintained in accordance with the instructions furnished. This warranty does not apply to the engine, motor, battery, battery charger or component parts thereof. Please refer to the applicable manufacturer's warranty on these items.

This warranty will not apply where the unit has been used commercially.

Warranty service is available through your local authorized service dealer or distributor. If you do not know the dealer or distributor in your area, please write to the Customer Service Department of MTD.

The return of a complete unit will not be accepted by the factory unless prior written permission has been extended by MTD.

This warranty gives you specific legal rights. You may also have other rights which vary from state to state.



WARNING

This unit is equipped with an internal combustion engine and should not be used on or near any unimproved forest-covered, brush-covered or grass-covered land unless the engine's exhaust system is equipped with a spark arrester meeting applicable local or state laws (if any). If a spark arrester is used, it should be maintained in effective working order by the operator.

In the State of California the above is required by law (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal lands. A spark arrester muffler is available at your nearest engine authorized service center.



To reduce the potential for any injury, comply with the following safety instructions. Failure to comply with the instructions may result in personal injury.

SAFE OPERATION PRACTICES FOR TILLERS

1. It is suggested that this manual be read in its entirety before attempting to assemble or operate this unit. Keep this manual in a safe place for future and regular reference and for ordering replacement parts.
2. Your tiller is a precision piece of power equipment, not a plaything. Therefore, exercise extreme caution at all times.
3. Read this Owner's Manual carefully. Be thoroughly familiar with the controls and the proper use of the equipment.
4. Never allow children to operate a power tiller. Only persons well acquainted with these rules of safe operation should be allowed to use your tiller.
5. No one should operate this unit while intoxicated or while taking medication that impairs the senses or reactions.
6. Keep the area of operation clear of all persons, particularly small children and pets.
7. Do not operate equipment when barefoot or wearing open sandals. Always wear substantial footwear.
8. Do not wear loose fitting clothing that could get caught on the tiller.
9. Do not start the engine unless the shift lever is in the neutral (N) position.
10. Do not stand in front of the tiller while starting the engine.
11. Do not place feet and hands on or near the tines when starting the engine or while the engine is running.
12. Never attempt to make a wheel or depth bar adjustment while the engine is running.
13. Do not leave the tiller unattended with the engine running.
14. Do not walk in front of the tiller while the engine is running.
15. Check the fuel before starting the engine. Gasoline is an extremely flammable fuel. Do not fill gasoline tank indoors, while the engine is running, or while the engine is still hot. Replace gasoline cap securely, and wipe off any spilled gasoline before starting the engine as it may cause a fire or explosion.
16. Do not run the engine while indoors. Exhaust gases are deadly poisonous.
17. Be careful not to touch the muffler after the engine has been running. It is hot.
18. Do not change the engine governor settings or overspeed the engine. Excessive engine speeds are dangerous.
19. Before any maintenance work is performed or adjustments are made, remove the spark plug wire and ground it on the engine block for added safety.
20. Use caution when tilling near buildings and fences. Rotating tines can cause damage or injury.
21. Before attempting to remove rocks, bricks and other objects from tines, stop the engine and be sure the tines have stopped completely. Disconnect the spark plug wire and ground to prevent accidental starting.
22. Check the tine and engine mounting bolts at frequent intervals for proper tightness.
23. Keep all nuts, bolts and screws tight to be sure the equipment is in safe working condition.
24. Never store the equipment with gasoline in the tank inside of a building where fumes may reach an open flame or spark. Allow the engine to cool before storing in any enclosure.

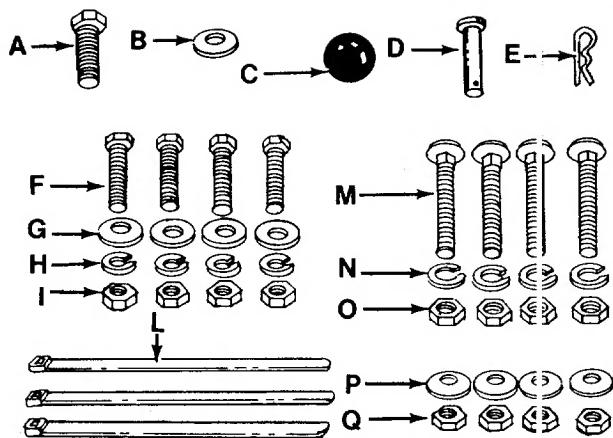


FIGURE 1.

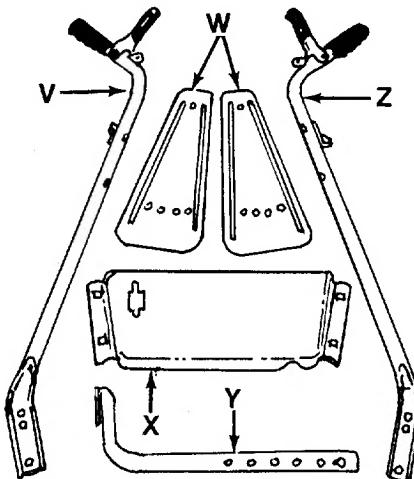


FIGURE 2.

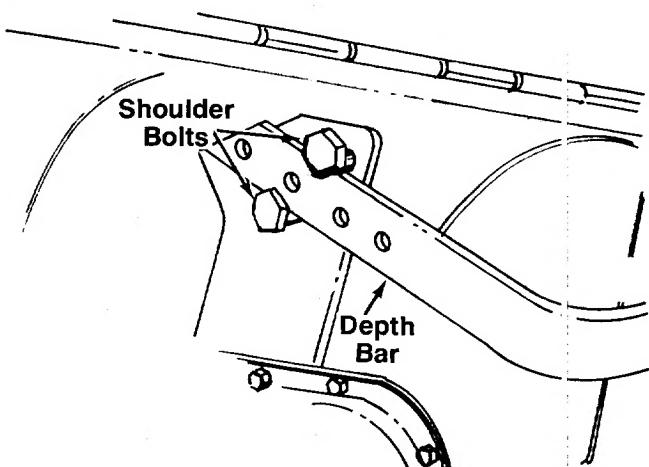


FIGURE 3.

ASSEMBLY

NOTE

This unit is shipped WITHOUT GASOLINE or OIL. After assembly, see separate engine manual for proper fuel and engine oil recommendations.

← Contents of Hardware Pack: (See Figure 1)

- A (1) Hex Bolt 3/8-16 x 3/4" Long
- B (1) Flat Washer 3/8" I.D.
- C (1) Ball Knob
- D (1) Clevis Pin
- E (1) Hairpin Cotter
- F (4) Hex Bolts 3/8-16 x 1.0" Long
- G (4) Belleville Washers 3/8" I.D.
- H (4) Lock Washers 3/8" I.D.
- I (4) Hex Nuts 3/8-16 Thread
- L (3) Cable Ties
- M (4) Carriage Bolts 5/16-18 x 1.75" Long
- N (4) Lock Washers 5/16" I.D.
- O (4) Hex Nuts 5/16-18 Thread
- P (4) Belleville Washers 5/16" I.D.
- Q (4) Hex Nuts 5/16-18 Thread
- R (1) Self-Tapping Screw (Not Shown)

← Loose Parts in Carton: (See figure 2)

- V (1) Handle—R.H.
- W (2) Side Shields
- X (1) Handle Panel
- Y (1) Depth Bar Assembly
- Z (1) Handle—L.H.

This owners manual covers various models of tillers. The units illustrated may vary from your unit. Follow the instructions which pertain to your unit.

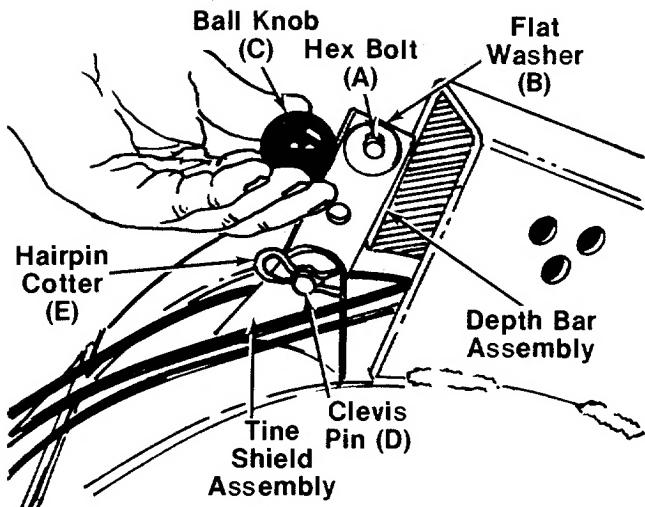
1. Remove tiller, loose parts and hardware pack from carton. Make certain all parts and literature have been removed from the carton before the carton is discarded.
2. Extend the control cables attached to the tiller and place on the floor. Be careful not to bend or kink the cables.

DEPTH BAR INSTALLATION

1. Raise the tine shield hinge flap assembly. Insert the depth bar assembly (Y) between the two shoulder bolts and up through the tine shield assembly as shown in figure 3.

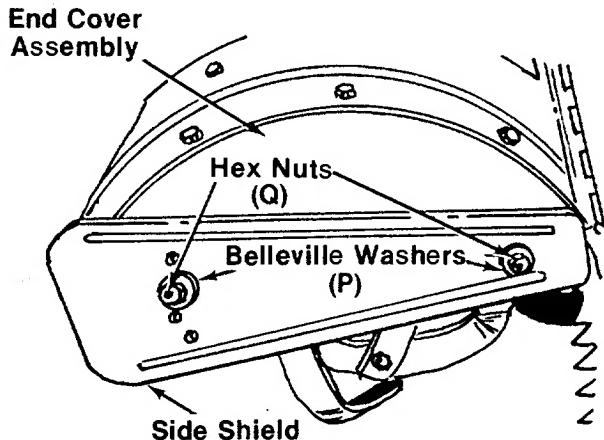
NOTE

For clarity, figure 3 was taken with tiller raised on end. It is not necessary to raise the tiller.



2. Insert clevis pin (D) through the tine shield and depth bar assemblies. Secure with hairpin cotter (E). See figure 4.
3. Insert hex bolt (A) into the upper hole of the depth bar assembly. Place flat washer (B) onto the hex bolt and thread ball knob (C) onto the hex bolt. See figure 4. Tighten securely.

FIGURE 4.



SIDE SHIELD INSTALLATION

Mount side shields (W) over the weld bolts on the end cover assemblies. Secure with belleville washers (P) and hex nuts (Q). See figure 5.

FIGURE 5.

HANDLE ASSEMBLY



NOTE

Left and right is determined from the operator's position, standing behind the tiller.

1. Place right handle (V) in position on the right side of the tiller. Insert hex bolts (F) through belleville washers (G), handle and mounting bracket. See figure 6. Secure with hex nuts (I) and lock washers (H).



NOTE

On models 402 and 404, handle height is determined by the three mounting holes. Refer to adjustment section.

2. Repeat step 1 for left handle (Z) on the left side of the tiller.

FIGURE 6—Model 405 Shown.

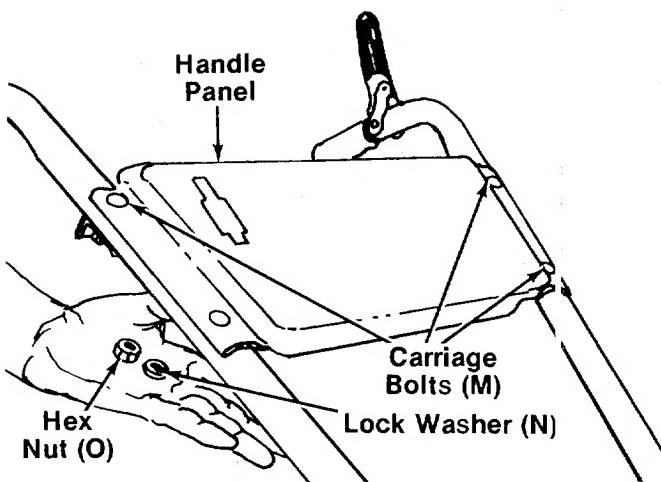


FIGURE 7.

3. Mount the handle panel (X) to the handles. Secure with carriage bolts (M), lock washers (N) and hex nuts (O). See figure 7.

NOTE

To align the holes in the handle panel and the handle, it may be necessary to loosen the cable brackets which are mounted to the back of the handles with self-tapping screws.

THROTTLE CONTROL INSTALLATION

Assemble the throttle control to the handle panel as follows.

1. Hold the throttle control assembly beneath the handle panel. Turn the control sideways and insert the lever up through the wide portion of the slot on the handle panel. See figure 8A.
2. After the end of the lever is through the slot, turn and then tip the control forward as shown in figure 8B to slide it through the slot.

NOTE

The lever must be all the way to the back of the control housing as shown in figure 8B.

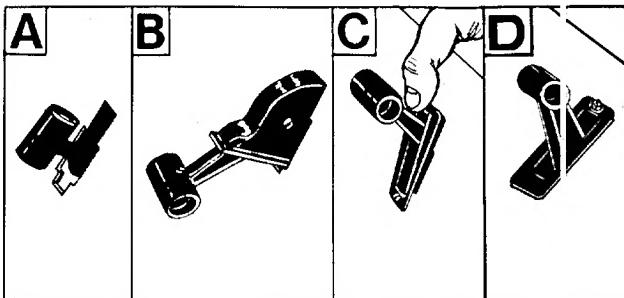


FIGURE 8.

3. Push the control back into the slot in the handle panel and press in place. Be certain the control is locked securely into the slot.

4. Secure the throttle control to the handle panel using the self-tapping screw (R). See figure 8D.

ATTACHING THE CLUTCH CONTROL CABLES

The drive clutch and tine clutch control cables are already attached to the unit. There is a tag attached to the drive clutch cable (cable which appears to be shorter). This cable attaches to the right handle.

NOTE

Both the drive clutch cable and the tine clutch cable are attached to springs, which are hooked to weld bolts as shown in figure 9. If either the cable or spring has come loose in shipping, it must be reassembled. Refer to page 18, reference numbers 1, 2, 89 and 98.

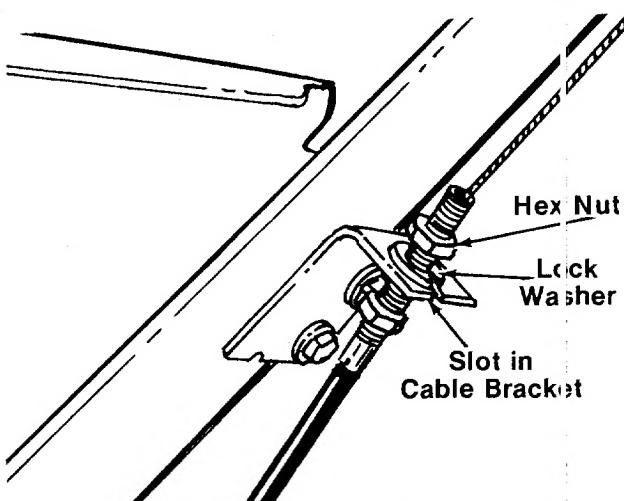
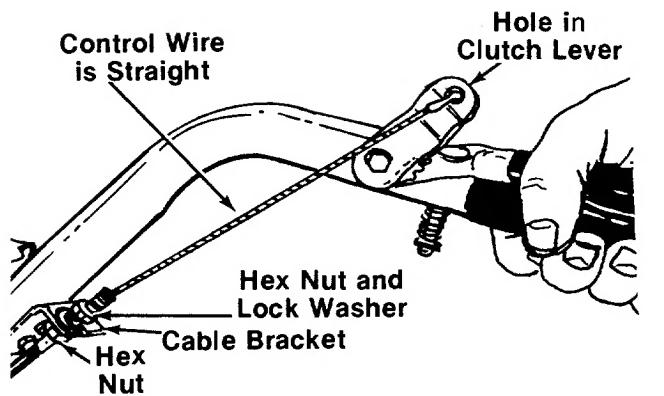


FIGURE 9.

1. Remove one nut and the lock washer from the end of the drive clutch cable (short cable). Slip the cable up through the slot on the cable bracket on the right handle. Retread hex nut and lock washer on the end of the cable. See figure 9. Do not tighten at this time.

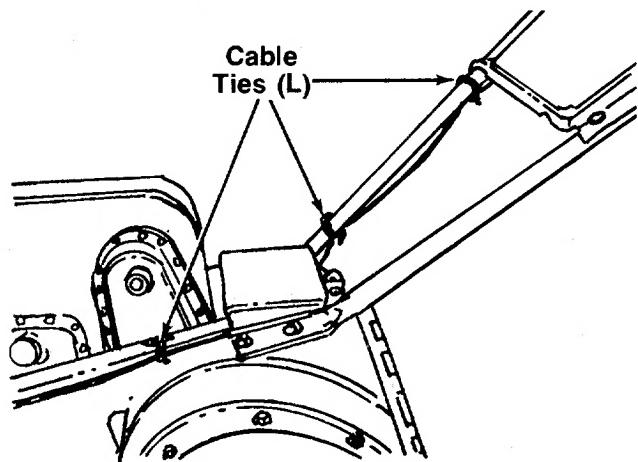


2. Hook the "Z" end of drive clutch cable into the hole in drive clutch lever.
3. With the clutch lever released (in the "up" position), adjust the bottom nut at the cable bracket so there is only a slight amount of slack in the control wire. Tighten the upper nut against the bracket. Squeeze the clutch lever against the handle. The control wire should now be straight. See figure 10.

→ **NOTE**

Do not overtighten control wire. Too much tension may cause it to break.

FIGURE 10.



4. Attach the tine clutch cable (cable which appears to be longer) to the tine clutch lever on the left handle in the same manner as the drive clutch cable.
5. Secure all the cables to the right handle as shown in figure 11 with cable ties (L). In addition, secure the throttle cable directly to the tiller frame with cable tie.

FIGURE 11.

CONTROLS—Location and Use

Throttle Control

The throttle control lever is located on the right hand side of handle panel and controls the engine speed. See figure 12.

1. Start—Push throttle control lever forward (down) to start position.
2. Stop—Pull lever back (upward) to stop the engine.

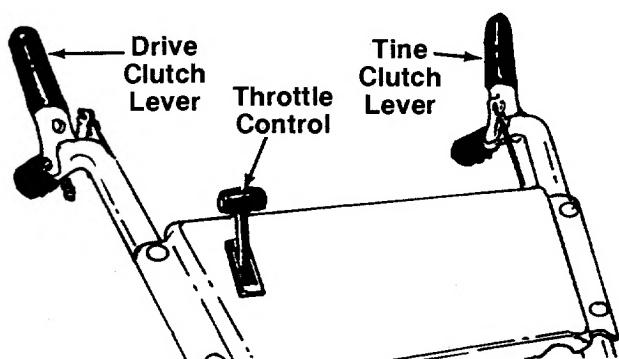


FIGURE 12.

Tine Clutch Lever

The tine clutch lever is located on the left hand e. See figure 12.

Squeeze the lever down to engage the tines. Release the lever to disengage the tines.

Drive Clutch Lever

The drive clutch lever is located on the right handle. See figure 12.

Squeeze the lever down to engage the wheels. Release the lever to disengage the wheels.

The drive clutch lever may be locked into position for easier handling. See figure 13.

1. Squeeze the lever down and press the locking pin up through the lever.
2. Release the lever until it catches on the locking pin.
3. To release the locking pin, squeeze the lever down and then release the lever.

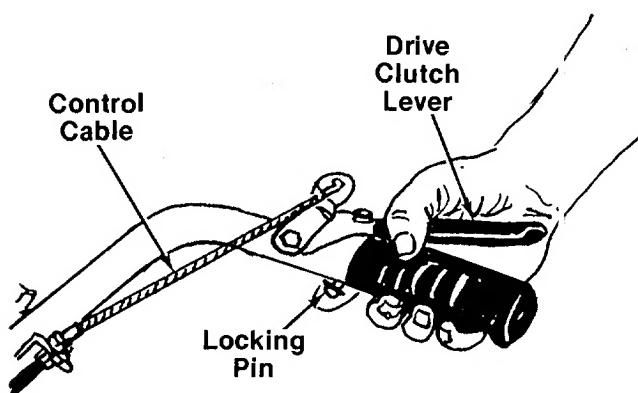


FIGURE 13.

OPERATION



NOTE

Engine is shipped without oil.

BEFORE STARTING

1. Before operating tiller for the first time or if tines have been removed and reassembled for any reason, check to be certain the tines are assembled correctly. **The sharp edge of the tines must enter the soil first as shown in figure 14.** (Figure 14 illustrates the left hand tines, viewed from the left hand side of the tiller. Right hand tines rotate in the same direction as the left hand tines.)

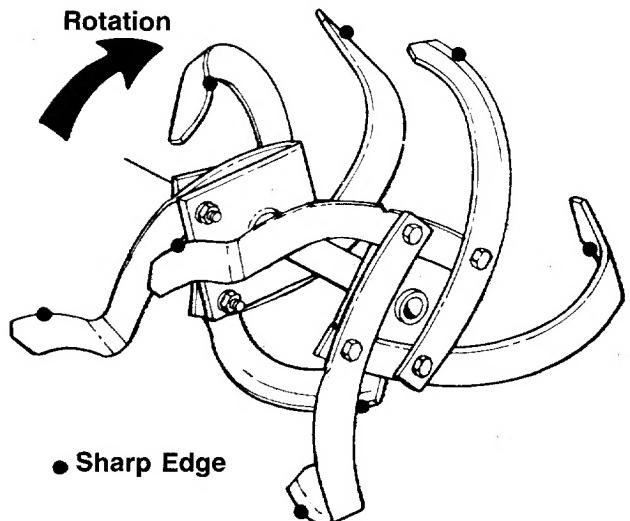


FIGURE 14.

2. Fill crankcase with oil as instructed in the separate engine manual packed with your unit.
3. Fill fuel tank with clean, fresh, lead-free, low-lead or regular grade leaded gasoline.

TO START ENGINE



BE SURE NO ONE IS STANDING IN FRONT OF THE TILLER WHILE THE ENGINE IS RUNNING OR BEING STARTED.

1. Place the throttle control lever in START position.
2. Move choke lever to CHOKE position.



A warm engine may not require choking.

3. Stand at side of tiller. Grasp the starter handle and pull out rapidly. Return it slowly to the engine. Repeat as necessary.
4. After engine starts, move choke lever gradually to OFF position.

Refer to engine manual for additional engine information.

TO STOP ENGINE

1. Move throttle control to OFF position.
2. Disconnect spark plug wire and ground to prevent accidentally starting while equipment is unattended.

HOW TO USE YOUR TILLER



WARNING

When operating the tiller for the first time, use the depth bar setting that gives 1½ inches of tilling depth (second hole from the top). Refer to figure 15. Use slow speed only.

Tilling depth is controlled by the depth bar which can be adjusted to five different settings. See figure 15. Adjust the side shields as shown in figure 16, as you adjust the depth bar. Be certain spark plug wire is disconnected and grounded against the engine.

1. When using the tiller for the first time, use the second adjustment hole from the top (1½" of tilling depth). See figure 15.

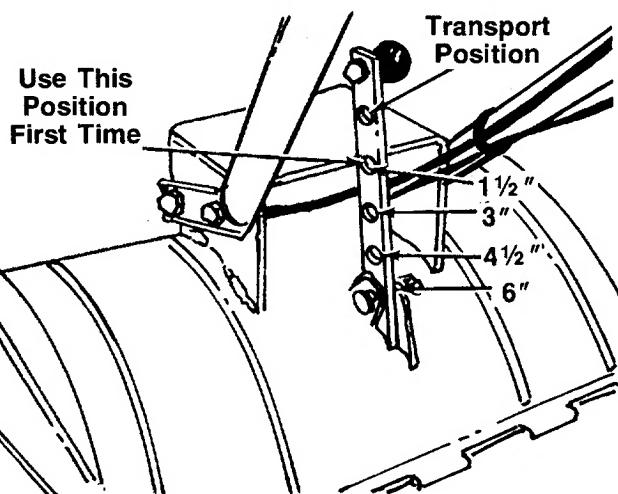


FIGURE 15.

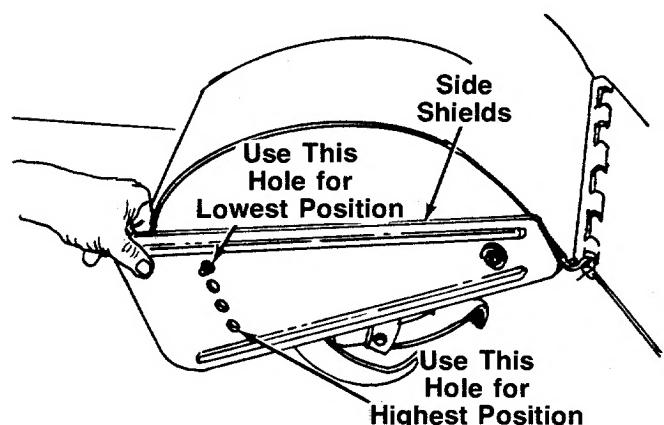


FIGURE 16.

2. When breaking up sod and for shallow cultivation, use the setting which gives 1½" of tilling depth (second hole from the top). Place the side shields in their lowest position. For further depth, raise the depth bar and side shields and make one or two more passes over the area.
3. When tilling loose soil, depth bar may be raised to its highest position (use bottom adjustment hole) to give the deepest tilling depth. Raise the side shields to their highest position.
4. To transport tiller, lower the depth bar (use top adjustment hole).

To adjust the depth bar, remove the clevis pin and hairpin cotter. See figure 15. Move the depth bar to the desired setting.

To adjust the side shields, remove the hex nut and belleville washer from the front and loosen the rear nut. See figure 16. Pivot the side shield to the desired position. Replace hex nut and belleville washer. Tighten securely.

To operate the tiller:

1. Select the depth bar setting.
2. Start engine as instructed on page 8.
3. Engage drive and tine clutch levers.



WARNING

Engage wheel drive before engaging the tine clutch lever.



NOTE

To transport tiller, do not engage the tine clutch lever. Engage the wheels only.



WARNING

Do not push down on the handles so that the wheels are lifted off the ground while the tine clutch is engaged, or the tiller could move backward and cause personal injury.

For best results, it is recommended the garden be tilled twice (lengthwise, then widthwise) to pulverize the soil.

ADJUSTMENTS

HANDLE ADJUSTMENT (Models 402 and 404)

The handle may be adjusted to one of three height positions. See figure 17. To adjust the handle:

1. Loosen the bolts on the ends of the handle.
2. Remove the hex bolts from the handle which are closest to the operator.
3. Pivot the handle to the desired position and replace the hardware. Tighten securely.

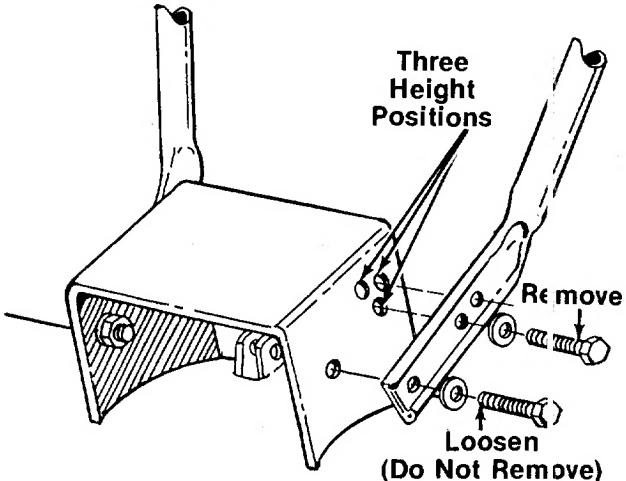


FIGURE 17.

HANDLE ADJUSTMENT (Model 405)

The handle may be placed in one of nine different positions. The handle may be adjusted to one of three height positions, and also may be adjusted to be in line with the tiller, or swung to the left or right so the operator is not walking in the freshly tilled soil.

To adjust the handle height, remove the hand knob and locking pin shown in figure 18. Select one of the three adjustment holes and reassemble.

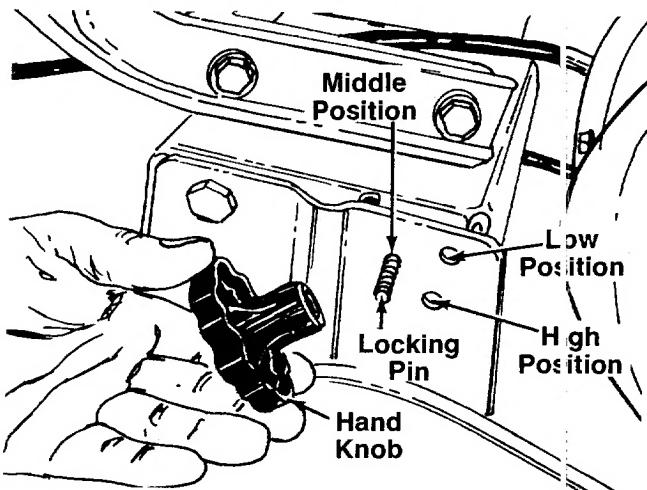


FIGURE 18. Model 405 Only.

To adjust the handle position from side to side, loosen the adjustment handle by turning it counterclockwise several turns. Pull the adjustment handle backward and pivot the tiller handle to desired position. Release and tighten the adjustment handle. See figure 19.

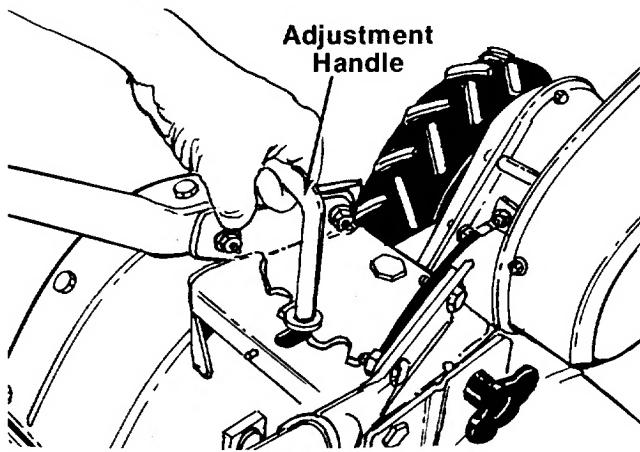


FIGURE 19. Model 405 Only.

BELT TENSION ADJUSTMENT—Drive and Tine Clutches

Periodic adjustment of the belt tension may be required due to normal stretch and wear on the belt. Adjustment is needed if the tines seem to hesitate while tilling, but the engine maintains the same speed.

To adjust, loosen the hex nuts at the cable bracket on the handle. See figure 20. With the clutch lever released as shown in figure 12, adjust the bottom nut so that there is only a slight amount of slack in the control wire. Tighten the upper nut against the bracket.



NOTE
Do not overtighten control wire.
Too much tension may cause it to break.

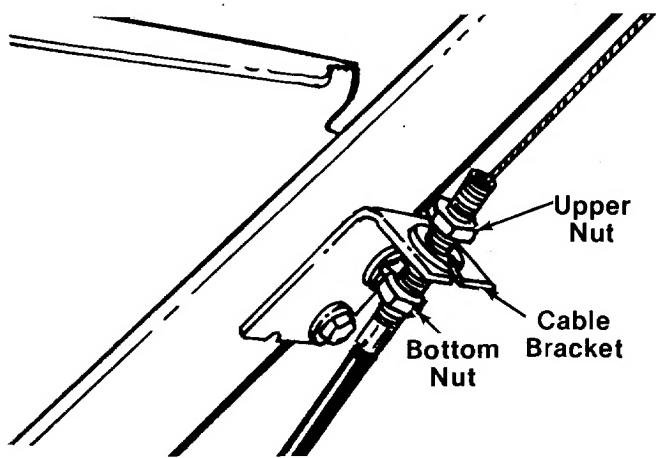


FIGURE 20.

CARBURETOR ADJUSTMENT



WARNING

If any adjustments are made to the engine while the engine is running, (e.g. carburetor), disengage all clutches and tines. Keep clear of all moving parts. Be careful of heated surfaces and muffler.

Never make unnecessary adjustments. The factory settings are correct for most applications. If adjustments are needed, refer to the separate engine manual packed with your tiller.

LUBRICATION

Chain Cases—The chain cases are pre-lubricated and sealed at the factory. They require no checking unless the chain cases are disassembled. To fill with grease, lay the left half of the chain case on its side. Add 12 ounces of plastilube #0 grease to the tine chain case or 10 ounces to the wheel chain case. Assemble the right half to it. This grease can be obtained at your nearest authorized dealer. Order part number 737-0133.

Wheels—Lubricate the wheel bearings with a light oil after each fifteen hours of operation.

Wheel Drive—The wheels are driven by pawl and ratchet drive. Lubricate the pawl and ratchet at least twice a season with a silicone type lubricant.

Figure 21 shows the left hub cap. To take off the hub caps, remove the two hex nuts and lock washers on the inside of the wheel. Remove the hub cap. A cotter pin holds the ratchet in place. The pawls must pivot freely. Clean with a solvent, replace any broken or worn parts, and lubricate.

The pawls and ratchet on the hub cap are assembled facing the opposite way.

After reassembling, test the operation of the drive without the engine running. Engage the drive clutch (on the right handle) and pull the tiller backwards. Both wheels should lock. Push the tiller forward and both wheels should rotate.



The wheels will "click" when the tiller is pushed forward.

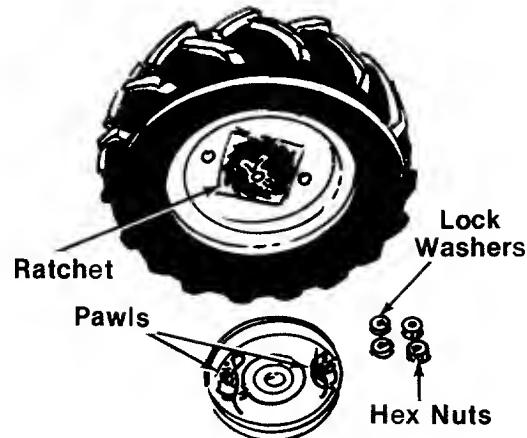


FIGURE 21.

Tine and Wheel Drive Controls—Lubricate the pivot points on the clutch levers and the cables at least once a season with light oil. The controls must operate freely in both directions.

Pivot Points—Lubricate all pivot points and linkages at least once a season with light oil.

MAINTENANCE



WARNING

Disconnect the spark plug wire and ground it against the engine before performing any repairs or maintenance.



IMPORTANT

If for any reason the tines are removed from the tiller, be certain the tines are reassembled so that the sharp edge of the tines enter the soil first. Refer to item number one under "Operation."

ENGINE OIL

After the first two hours of operating a new engine, drain the oil from the crankcase while the engine is still hot and refill the crankcase with new oil; thereafter change the oil after every 25 hours of operation.

To avoid spilling gasoline on your lawn or driveway, plan to change the oil when the gasoline tank and carburetor are empty.

To change the oil, refer to the separate engine manual.

Check oil level every eight hours of operation. Be sure level is maintained full to point of overflowing.

AIR CLEANER

Under normal operating conditions, the air cleaner, located on top of the carburetor, must be serviced after every ten hours of use. Under extremely dusty operating conditions, the air cleaner must be serviced after every hour of operation.

To service the air cleaner, refer to the separate engine manual packed with your tiller.



Never run your engine without air cleaner completely assembled.

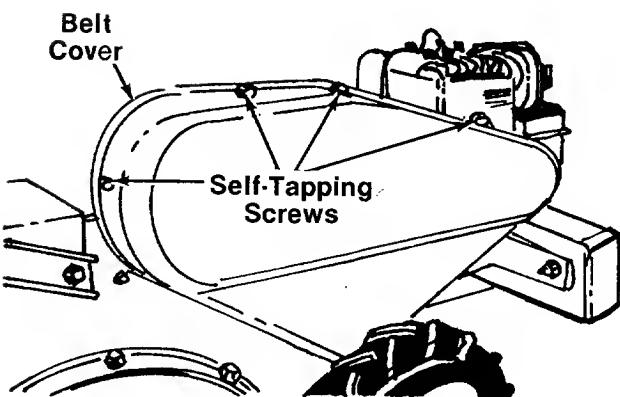


FIGURE 22.

2. Lift the belt from under the flat idler pulley. See figure 23.
3. Remove the wire belt guard. See figure 23.

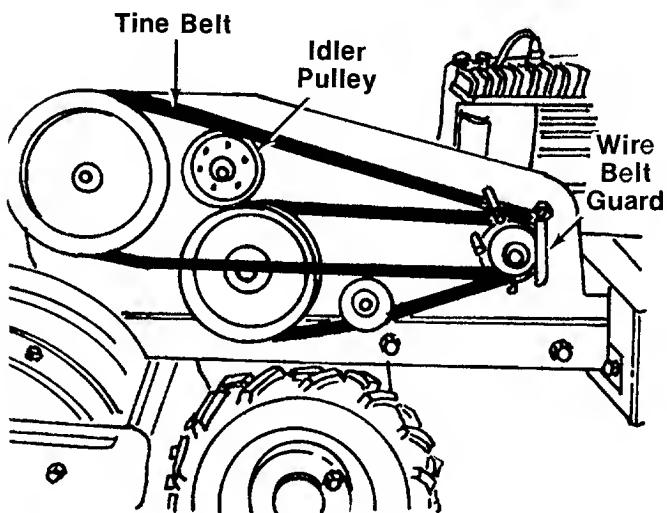


FIGURE 23.

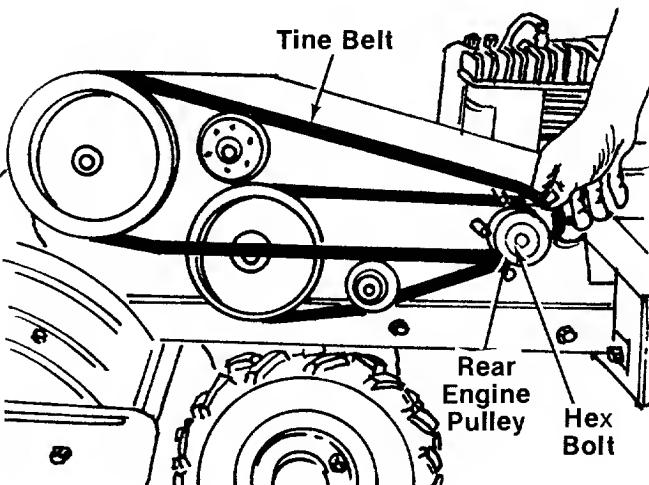


FIGURE 24.

Tine (Long) Belt Removal

1. Remove belt cover by removing the four self-tapping screws. See figure 22.

4. Loosen, but do not remove, the hex bolt on the rear engine pulley. See figure 24.
5. Slip the engine pulley out until belt can be removed.
6. Install new belt.

Drive (Short) Belt Removal

1. Remove the tine belt as instructed in the previous section.
2. Remove the hex bolt, lock washer and flat washer from the rear engine pulley. See figure 24. Slip the rear engine pulley off the engine.
3. Loosen the two set screws on the front engine pulley. See figure 25.



Do not lose the square key on the engine shaft.

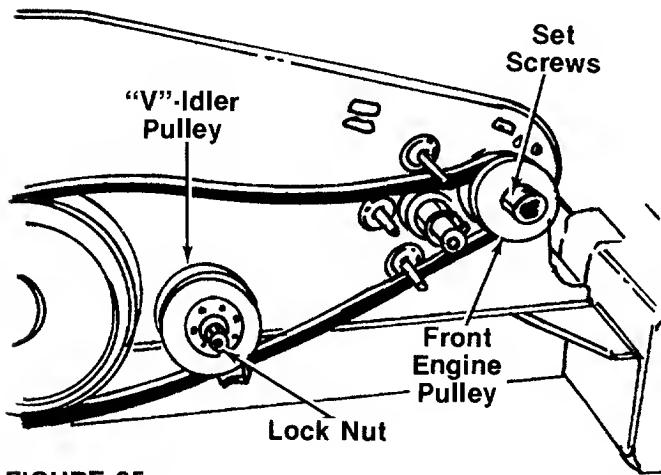


FIGURE 25.

4. Remove the lock nut on the "V"-idler pulley. See figure 25.
5. Slide the front engine pulley and "V"-idler pulley out as shown in figure 26.

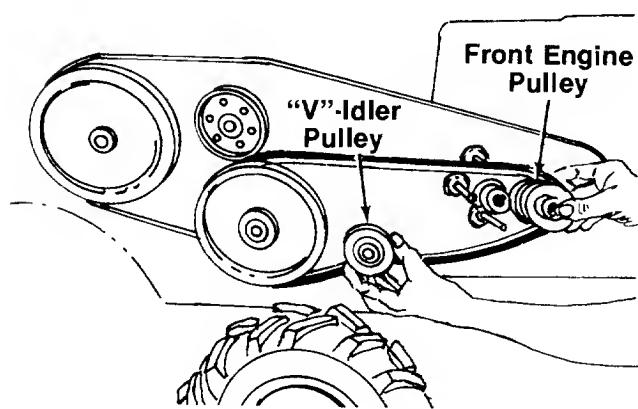


FIGURE 26.

6. Remove the belt and install the new belt. Be sure the belt is routed around the guide pins as shown in figure 27.



Belt must be between the "V"-idler pulley and the idler bracket. See figure 27.

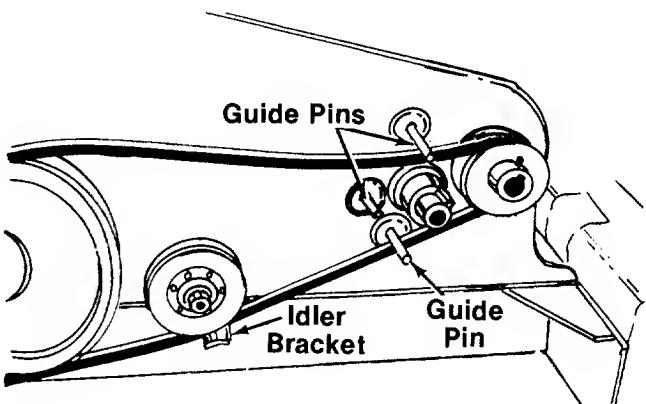


FIGURE 27.



Upon reassembly, refer to illustration on page 18 for correct assembly of wire belt guard for your model tiller.

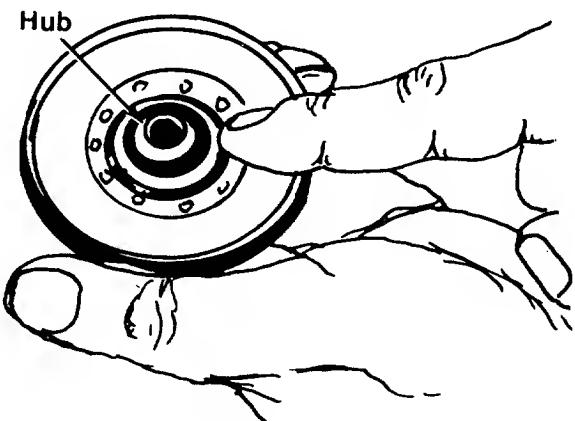


FIGURE 28.



If the "V"-idler or flat idler pulleys are removed for any reason, be sure to install with hub side against the idler bracket. See figure 28.

OFF-SEASON STORAGE

If the tiller is to be inoperative for a period longer than 30 days, the following precautions are recommended. Keep your tiller in a weatherproof, dry area. If stored for over 30 days the following steps will protect the essential engine parts from gum deposits.

1. Working outdoors, drain all fuel from the fuel tank. Use a clean, dry cloth to absorb the small amount of fuel remaining in the tank, then run the engine until all fuel in carburetor is exhausted.



DO NOT DRAIN FUEL WHILE SMOKING, OR IF NEAR AN OPEN FIRE.

2. Drain all the oil from the crankcase (this should be done after the engine has been operated and is still warm) and refill the crankcase with clean new oil as instructed in the engine manual.
3. Protect the inside of the engine for storage as instructed in the separate engine manual packed with your unit.
4. Clean the exterior of engine and the entire tiller thoroughly.
5. Wipe tines with oiled rag to prevent rust.



NOTE

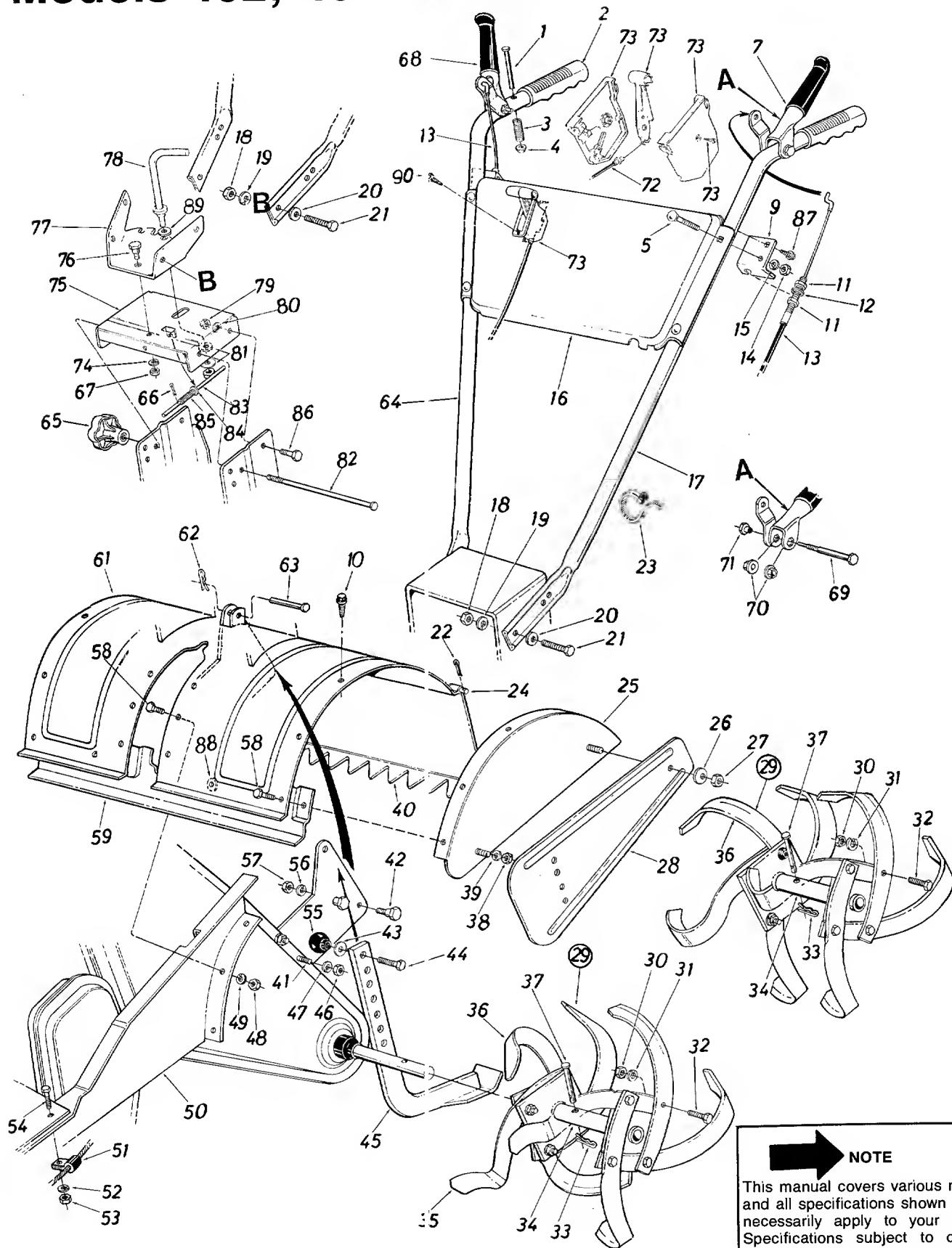
When storing any type of power equipment in an unventilated or metal storage shed, care should be taken to rustproof the equipment. Using a light oil or silicone, coat the equipment, especially any springs, bearings and cables.

TROUBLE SHOOTING CHART

SYMPTOM	POSSIBLE CAUSE(S)	SOLUTION
Engine fails to start	1. Check fuel tank for gas. 2. Spark plug lead wire disconnected. 3. Faulty spark plug.	1. Fill tank if empty. 2. Connect lead wire. 3. Spark should jump gap between control electrode and side electrode. If spark does not jump, replace the spark plug.
Hard starting or loss of power	1. Spark plug wire loose. 2. Dirty air cleaner.	1. Connect and tighten spark plug wire. 2. Clean air cleaner as described in engine manual.
Engine overheats	1. Carburetor not adjusted properly. 2. Air flow restricted. 3. Engine oil level low.	1. Adjust carburetor. See engine manual. 2. Remove blower housing and clean as described in the engine manual. 3. Fill crankcase with the proper oil.
Controls do not engage	Belts worn and/or stretched.	Make control cable adjustment (see adjustment section) or replace belt.

NOTE: For repairs beyond the minor adjustments listed above, please contact your local service dealer.

Models 402, 404 and 405



NOTE

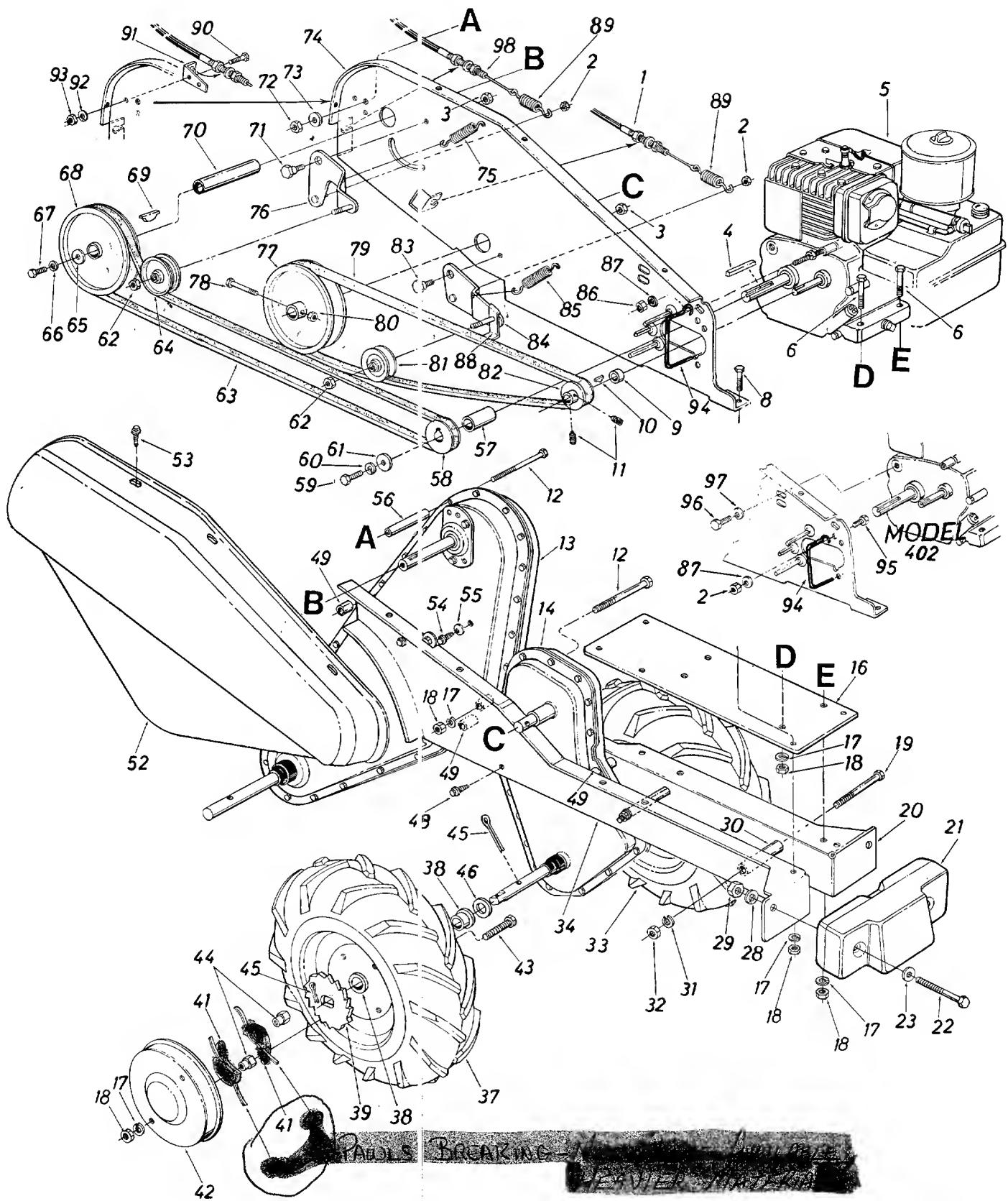
This manual covers various models and all specifications shown do not necessarily apply to your model. Specifications subject to change without notice or obligation.

Models 402, 404 and 405

PARTS LIST FOR MODELS 402, 404 AND 405 ROTARY TILLERS

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART NO.	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	711-0750		Clevis Pin 1/4" Dia. x 2.25"	49	736-0119			L-Wash. 5/16" I.D.*	
2	720-0180		Grip	50	14975	463		Frame Rail—L.H.	
3	732-0442		Compression Spring .33" O.D. x 1.2" Lg.	51	726-0175			Clamp 5/16" Dia.	
4	726-0106		Cap Speed Nut 1/4" Rod	52	736-0119			L-Wash. 5/16" I.D.*	
5	710-0458		Carr. Bolt 5/16-18 x 1.75"*	53	712-0267			Hex Nut 5/16-18 Thd.*	
7	784-0031		Clutch Grip Ass'y.—L.H. (Tines)	54	710-0118			Hex Bolt 5/16-18 x 3/4" Lg.*	
9	15093		Clutch Cable Bracket	55	720-0165			Ball Knob 1 1/4" Dia.	
10	710-0607		Hex Wash. S-Tap Scr. 5/16-18 x .62" Lg.	56	736-0169			L-Wash. 3/8" I.D.*	
11	712-0256		Hex Nut 5/16-24 Thd.	57	712-0798			Hex Nut 3/8-16 Thd.*	
12	736-0119		L-Wash. 5/16" I.D.*	58	710-0118			Hex Bolt 5/16-18 x .75" Lg.*	
13	746-0484		Clutch Control Cable	59	15393			Brkt. Reinforcement (404, 405)	
14	712-0267		Hex Nut 5/16-18 Thd.*	60	710-0118			Brkt. Reinforcement (402)	
15	736-0119		L-Wash. 5/16" I.D.*	61	784-0026			Hex Bolt 5/16-18 x .75" Lg.*	
16	784-0036		Handle Panel	62	714-0149			Tine Shield Ass'y. (405)	
17	749-0639		Handle—L.H. (402, 404)	63	711-0415			Tine Shield Ass'y. (404)	
	749-0637		Handle—L.H. (405)	64	749-0636			Tine Shield Ass'y. (402)	
18	712-0798		Hex Nut 3/8-16 Thd.*	65	749-0638			Hairpin Cotter	
19	736-0169		L-Wash. 3/8" I.D.*	66	720-0195			Clevis Pin 3/8" Dia.	
20	736-0105		Bell-Wash. 3/8" I.D.	67	714-0127			Handle—R.H. (405)	
21	710-0253		Hex Bolt 3/8-16 x 1.00" Lg.*	68	712-0375			Handle—R.H. (402, 404)	
22	714-0507		Cotter Pin 3/32" Dia. x 3/4"*	69	784-0029			Hand Knob (405)	
23	725-0157		Cable Tie	70	738-0560			Cotter Pin 1/16" Dia. x .75" Lg.* (405)	
24	747-0432		Tiller Flap Rod (404, 405)	71	741-0402			Hex Cent. L-Nut 3/8-16 Thd. (405)	
	747-0501		Tiller Flap Rod (402)	72	738-0561			Clutch Grip Ass'y.—R.H. (Wheels)	
25	14989		End Cover Ass'y.—L.H.	73	746-0502			Shoulder Bolt .38" Dia. x 1.53" Lg.	
	14990		End Cover Ass'y.—R.H. (Not Shown)	74	738-0512			Hex Flange Plastic Bearing	
26	736-0242		Bell-Wash. 5/16" I.D.	75	831-0692			Shoulder Nut 1/4-20 Thd.	
27	712-0267		Hex Nut 5/16-18 Thd.*	76	746-0502			Throttle Control Wire (404, 405)	
28	15390		Side Shield	77	736-0219			Throttle Control Wire (402)	
29	15397	463	L.H. Tine Ass'y. Comp. (404, 405)	78	784-0022			Throttle Control Box Ass'y.	
	15398		R.H. Tine Ass'y. Comp. (404, 405) (Not Shown)	79	738-0281			Bell-Wash. .40" I.D. x 1.13" O.D. (405)	
	784-0083		L.H. Tine Ass'y. Comp. (402)	80	741-0402			Handle Pivot Bracket (405)	
	784-0082		R.H. Tine Ass'y. Comp. (402) (Not Shown)	81	738-0561			Shoulder Bolt 5/8" Dia. x .165" Lg. (405)	
30	712-0241		Hex Nut 3/8-24 Thd.*	82	784-0019			Handle Mtg. Bracket (405)	
31	736-0169		L-Wash. 3/8" I.D.*	83	784-0025			Adj. Handle Ass'y. (405)	
32	710-0191		Hex Bolt 3/8-24 x 1.25" Lg.*	84	712-0375			Hex Cent. L-Nut 3/8-16 Thd. (405)	
33	714-0149		Hairpin Cotter	85	736-0105			Bell-Wash. .40" I.D. x .88" O.D. (405)	
34	14978		Tine Adapter Ass'y. (404, 405)	86	736-0253			Bell-Wash. 1/2" I.D. x 1.00" O.D. (405)	
	784-0084		Tine Adapter Ass'y. (402)	87	711-0765			Lock Pin 5/16" Dia. x 8" (405)	
35	742-0106		Tine 12" R.H.	88	784-0023			Lower Sliding Ass'y. (405)	
36	742-0105		Tine 12" L.H.	89	736-0463			Fl-Wash. .291" I.D. x .62" O.D. (405)	
37	711-0415		Clevis Pin 3/8" Dia.	90	732-0145			Compression Spring .36" O.D. x 1.00" Lg. (405)	
38	712-0267		Hex Nut 5/16-18 Thd.*	91	738-0147			Shoulder Bolt 1/2" Dia. x .170" Lg. (405)	
39	736-0119		L-Wash. 5/16" I.D.*	92	710-0599			Hex Wash. S-Tap Scr. 1/4-20 x .50" Lg.	
40	14979		Tine Shield Flap (404, 405)	93	736-0242			Bell-Wash. 5/16" I.D.	
	784-0088		Tine Shield Flap (402)	94	736-0285			Fl-Wash. 5/8" I.D. (405)	
41	710-0736		Hex Bolt 5/16-18 x 1.0" Lg.*	95	710-0779			Self-Tap Scr. #10 x 1/2" Lg.	
42	738-0507		Shld. Bolt 1/2" Dia. x .426"						
43	736-0117		Fl-Wash. 3/8" I.D. x 5/8" O.D.						
44	710-0216		Hex Bolt 3/8-16 x 3/4" Lg.*						
45	14992		Depth Bar Ass'y.						
46	712-0267		Hex Nut 5/16-18 Thd.*						
47	736-0119		L-Wash. 5/16" I.D.*						
48	712-0267		Hex Nut 5/16-18 Thd.*						

Models 402, 404 and 405



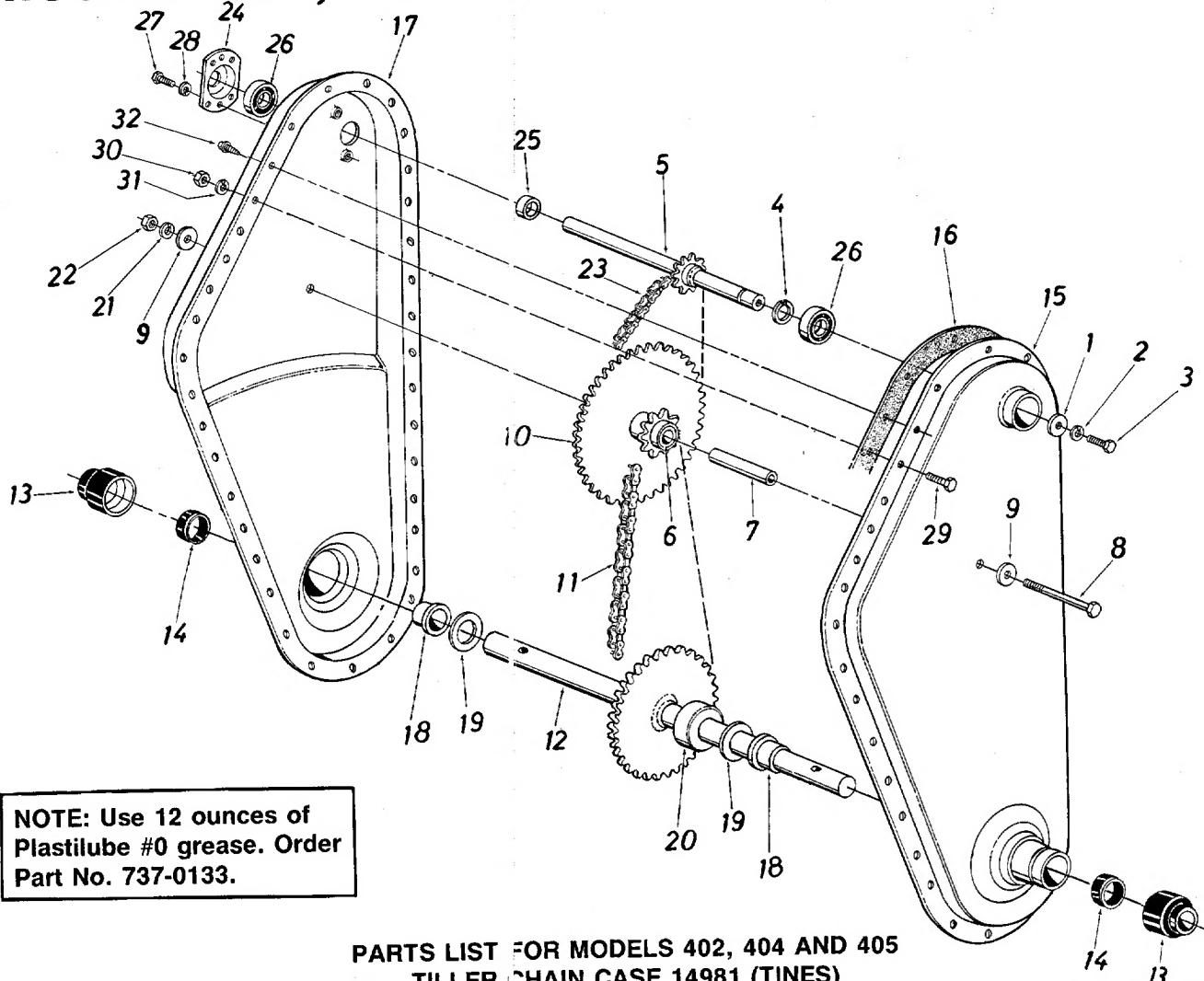
Models 402, 404 and 405

PARTS LIST FOR MODELS 402, 404 AND 405 ROTARY TILLERS

	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	746-0484		Clutch Control Cable (Wheels)		57	750-0442		Spacer 3/4" I.D. x 1.12" O.D. x 1.56" Lg.	
2	712-0107		Hex Cent. L-Nut 1/4-20 Thd.		58	756-0396		1/2" "V"-4L Pulley 3/4" I.D. x 2.59" O.D.	
3	712-0266		Hex Cent. L-Nut 3/8-16 Thd.*					Hex Bolt 5/16-24 x 1.0" Lg.	
4	714-0122		Sq. Key 3/16" Dia. x .75		59	710-0117		L-Wash. 5/16" I.D.*	
5	—		Engine		60	736-0119		Fl-Wash. 5/16" I.D. x 1.25"	
6	710-0442		Hex Bolt 5/16-18 x 1.50" Lg.*		61	736-0343		O.D. (402, 404, 405)	
8	710-0118		Hex Bolt 5/16-18 x .75" Lg.*					Hex L-Nut 3/8-24 Thd.	
9	711-0494		Spacer .51" I.D. x 3/4" O.D. x .39" Lg. (404, 405)		62	712-0116		"V"-Belt 1/2" x 54" Lg.	
10	714-0131		Hi-Pro Key #5 Woodruff		63	754-0195		Fl-Idler Pulley 3.75" O.D. x 3/8" I.D.	
11	710-0938		Set Scr. 1/4-28 x .25" Lg.		64	756-0405		Fl-Wash. .25" I.D. x .93" O.D. x .120	
12	710-0189		Hex Bolt 5/16-18 x 3.0" Lg.*		65	736-0176		L-Wash. 1/4" I.D.*	
13	14981		Chain Case Ass'y. Comp.—Tines		66	736-0329		Hex Bolt 1/4-28 x .75" Lg.*	
14	14963		Chain Case Ass'y. Comp.—Wheels (404, 405)		67	710-0412		Split Pulley 6" Dia. x 5/8" I.D.	
	784-0102		Chain Case Ass'y. Comp.—Wheels (402)		68	756-0389		Hi-Pro Key	
16	14973	463	Engine Mounting Plate		69	714-0388		Spacer	
17	736-0119		L-Wash. 5/16" I.D.*		70	750-0472		Shld. Bolt 1/2" Dia. x .210" Lg.	
18	712-0267		Hex Nut 5/16-18 Thd.*		71	738-0183		Hex Nut 5/16-18 Thd.*	
19	710-0830		Hex Bolt 3/8-24 x 3.0" Lg.*		72	712-0267		L-Wash. 5/16" I.D.*	
20	14975		Frame Rail—L.H.		73	736-0119		Side Plate Ass'y.	
21	723-0340		Counter Weight		74	14991		Ext. Spring .50" O.D. x 1.55" Lg.	
22	710-0786		Hex Bolt 1/2-13 x 4.0" Lg.*		75	732-0445		Idler Bracket Ass'y.—Tines	
23	736-0326		Fl-Wash. 1/2" I.D. x 1.0" O.D.		76	14971	463	Pulley 6" Dia. x 5/8" I.D.	
28	736-0921		L-Wash. 1/2" I.D.*		77	756-0387		Hex Bolt 1/4-28 x 1.50" Lg.*	
29	712-0206		Hex Nut 1/2-13 Thd.*		78	710-0698		"V"-Belt 1/2" x 43" Lg. (404, 405)	
30	750-0579		Spacer 3/8" I.D. x 5/8" O.D. x 2.18" Lg.		79	754-0109		"V"-Belt 1/2" x 42" Lg. (402)	
31	736-0169		L-Wash. 3/8" I.D.*		80	712-0117		Hex Cent. L-Nut 1/4-28 Thd.*	
32	712-0241		Hex Nut 3/8-24 Thd.*		81	756-0166		"V"-Idler Pulley 2-5/8" O.D.	
33	734-1129		Comp. Wheel Ass'y.—L.H.		82	756-0386		1/2" "V"-Pulley 2 1/4" O.D. x .50" I.D.	
34	14974		Frame Rail—R.H.		83	738-0147		Shld. Bolt 1/2" Dia. x .160" Lg.	
37	734-1130		Comp. Wheel Ass'y.—R.H.		84	14969		Idler Bracket Ass'y—Wheels	
38	741-0227		Flange Brg. 7/8" I.D. x 1.12" Lg.		85	732-0445		Ext. Spring .50" O.D. x 1.55" Lg. (404, 405)	
39	748-0292		Ratchet Wheel					Ext. Spring .50" O.D. x 1.97" Lg. (402)	
40	10622		Nylon Spring					Hex Nut 1/4-20 Thd.*	
41	748-0291		Pawl .44" I.D.		86	712-0287		Bell-Wash. 1/4" I.D.	
42	14967		Wheel Cover		87	736-0270		Belt Keeper Ass'y.	
43	710-0874		Hex Bolt 5/16-18 x 1.25" Lg.*		88	15399		Ext. Spring	
44	712-0329		Special Hex Nut 5/16-24 Thd.		89	732-0387		Hex Bolt 5/16-18 x .75"** (405)	
45	714-0470		Cotter Pin 1/8" Dia. x 1.25"**		90	710-0118		Clutch Cable Brkt. (405)	
46	736-0214		Fl-Wash. 7/8" I.D. x 1-3/8" O.D. x .06		91	15093		Lock Washer 5/16" I.D.* (405)	
48	710-0600		Hex Wash. Self-Tap Scr. 5/16-24 x .50" Lg.		92	736-0119		Hex Nut 5/16-18 Thd.* (405)	
49	750-0470		Spacer 5/16" I.D. x 16 Ga. x .96" Lg.		93	712-0267		Belt Keeper	
52	14980	447	Belt Cover		94	747-0507		Hex Bolt 1/4-20 x 1.25" Lg. (402)	
53	710-0599		Hex Wash. S-Tap Scr. 1/4-20 x .50" Lg.		95	710-0106		Hex Bolt 5/16-24 x .62" Lg.* (402)	
54	710-0653		Hex Wash. S-Tap Scr. 1/4-20 x 3/8" Lg.		96	710-0237		Bell-Wash. 5/16" I.D. (405)	
55	736-0270		Bell-Wash. 1/4" I.D.		97	736-0242		Clutch Control Cable (Tines) (402, 404)	
56	750-0219		Spacer 3/8" I.D. x 1/2" O.D. x 2.0" Lg.		98	746-0484		Clutch Control Cable (Tines) (405)	

Models 402, 404 and 405

TINE CHAIN CASE 14981

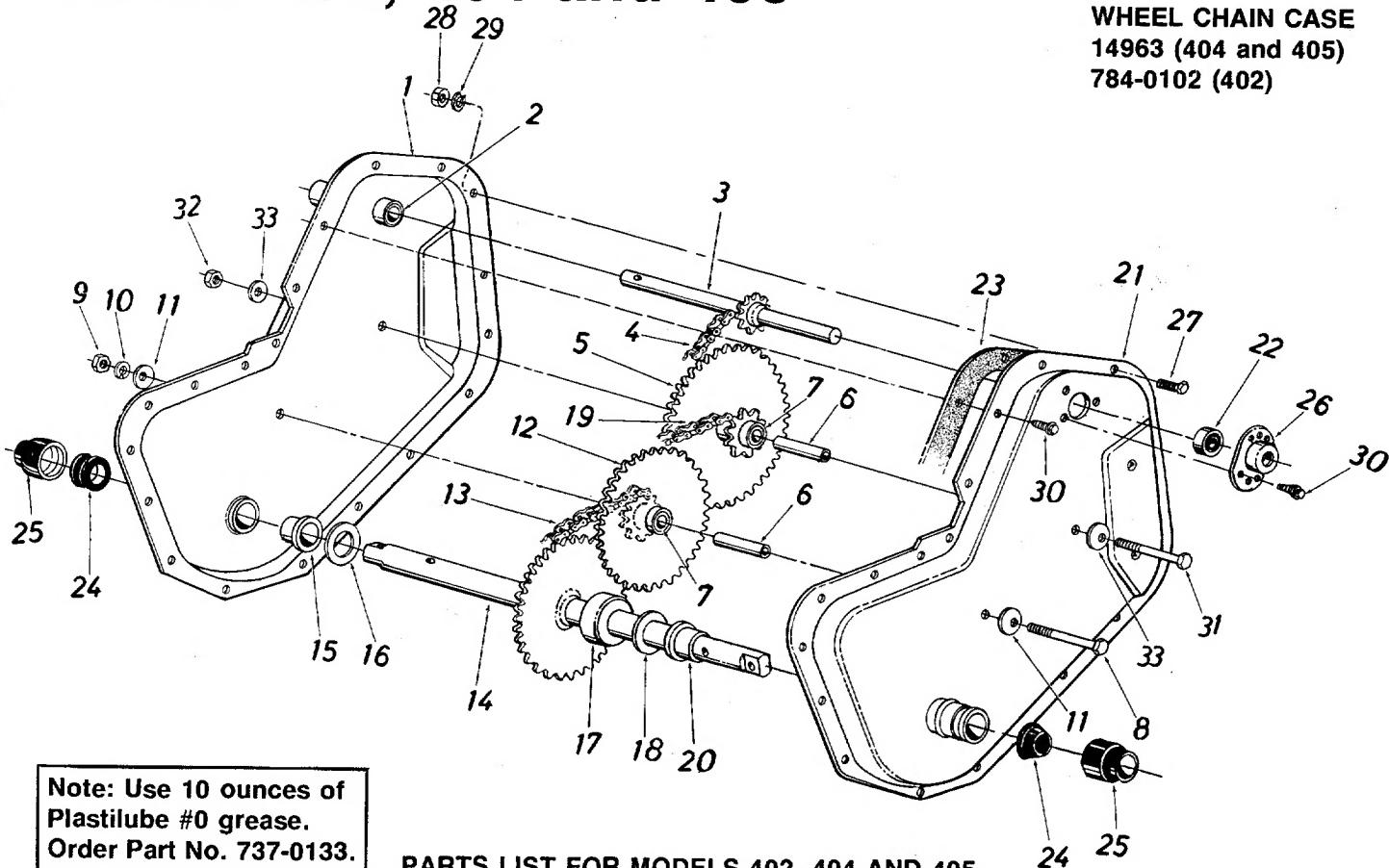


PARTS LIST FOR MODELS 402, 404 AND 405
TILLER CHAIN CASE 14981 (TINES)

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	736-0176		Fl-Wash. 1/4" I.D. x .93" C.D. x .120		17	14985		Ass'y. Tiller Housing—L.H.	
2	736-0329		L-Wash. 1/4" I.D.*		18	731-0374		Flange Brg. 1.00" I.D.	
3	710-0513		Hex Bolt 1/4-28 x .62" Lg. w/Patch		19	736-0163		Fl-Thrust Wash. 1.0" I.D. x .03 Thk.	
4	716-0131		External Snap Ring—5/8" Dia.		20	750-0570		Step Spacer	
5	04956		Input Shaft Ass'y.		21	736-0169		L-Wash. 3/8" I.D.*	
6	741-0304		Bearing 5/8" I.D. x 3/4" O.D. x 1.860" Lg.		22	712-0711		Hex Nut 3/8-24 Thd.*	
7	750-0275		Sprocket Hub Tubing 3/8" I.D. x 5/8" O.D. x 1.90		23	713-0327		#35 Chain 3/8" Pitch x 52 Links Endless	
8	710-0629		Hex Bolt 3/8-24 x 2.75" Lg.*		24	05034		Bearing Housing 1.38" I.D. Spacer	
9	736-0258		Fl-Wash. 3/8" I.D. x 1.25" O.D. x .10		25	750-0471		Ball Bearing .625" I.D. x 1.38" O.D. x .437	
10	713-0331		Sprocket Ass'y.		26	741-0155		Hex Wash. SF-Tap Scr. 1/4-20 x .50" Lg.	
11	713-0328		#50 Chain 5/8" Pitch x 46 Links Endless		27	710-0599		L-Wash. 1/4" I.D.*	
12	14986		Tine Shaft Ass'y.		28	736-0329		Hex Bolt 5/16-18 x .75" Lg.*	
13	731-0487		Dust Cup		29	710-0118		Hex Nut 5/16-18 Thd.*	
14	721-0175		Seal Ring Single Lip, Springless		30	712-0267		L-Wash. 5/16" I.D.*	
15	14984		Ass'y. Tiller Housing—R. H.		31	736-0119		Hex Wash. SF-Tap Scr. 1/4-20 x .50" Lg.	
16	721-0170		Gasket	—	32	710-0599		Grease—Plastilube #0 (12 oz.)	
						737-0133			

Models 402, 404 and 405

WHEEL CHAIN CASE
14963 (404 and 405)
784-0102 (402)



PARTS LIST FOR MODELS 402, 404 AND 405
TILLER CHAIN CASE (WHEELS)

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	14962		Chain Case Half Ass'y.—R.H.		18	736-0265		Fl-Wash. .88" I.D. x 1.50"	
2	748-0154		Bearing 5/8" I.D. x .813" O.D. x 1.31" Lg.		19	713-0267		O.D. x .03 #420 Chain 1/2" Pitch x 30	
3	14960		Input Shaft Ass'y.		20	741-0227		Links Endless	
4	713-0325		Chain #35—3/8" Pitch x 44 Links		21	15797		Flange Bearing	
5	713-0316		Sprocket and Hub Ass'y.		22	741-0155		Chain Case Half Ass'y.—L.H.	
6	750-0351		Bearing Inner Axle		23	721-0156		Bearing	
7	741-0228		Sleeve Brdg. 5/8" I.D. x 3/4" O.D. x 1.50		24	721-0157		Gasket	
8	710-0369		Hex Bolt 3/8-24 x 2.50" Lg.*		25	731-0486		Seal	
9	712-0116		Hex Ins. L-Nut 3/8-24 Thd.		26	05034		Dust Cup	
10	736-0169		L-Wash. 3/8" I.D.*		27	710-0195		Bearing Housing	
11	736-0219		Bell-Wash. .41" I.D. x 1.13" O.D. x .03		28	712-0138		Hex Bolt 1/4-28 x 5/8" Lg.	
12	713-0330		Sprocket & Hub Ass'y. 9T-22T		29	736-0329		Hex Nut 1/4-28 Thd.	
13	713-0326		#420 Chain 1/2 Pitch x 28 Links Endless		30	710-0599		L-Wash. 1/4" I.D.*	
14	14968		Wheel Shaft Ass'y. (404, 405)		31	710-0378		Hex Wash. S-Tap Scr. 1/4-20 x .50" Lg.	
	784-0095		Wheel Shaft Ass'y. (402)		32	712-0158		Hex Bolt 5/16-18 x 2.5" Lg.	
15	741-0227		Flange Bearing		33	736-0159		Hex Cent. L-Nut 5/16-18 Thd.	
16	736-0265		Fl-Wash. .88" I.D. x 1.5" O.D. x .03		—	737-0133		Fl-Wash. 5/16" I.D.	
17	750-0354		Spacer 7/8" I.D. x 1 3/4" O.D. x .68" Lg.		—	14963		Grease—Plastilube #0 (10 oz.)	
				—	784-0102		Chain Case Ass'y. Comp. (404, 405)	Chain Case Ass'y. Comp. (402)	N

*For faster service obtain standard nuts, bolts and washers locally.

If these items cannot be obtained locally, order by part number and size as shown on parts list.

(463—Top Flite Red)

When ordering parts, if color or finish is important use the appropriate color code shown above. (e.g. Top Flite Red—04820 (463).)

Heavy Duty Rear Tine Garden Tiller Attachments

Available for All-Season Use

31-0110 8" Furrower Opener

31-0144 "V"-Bar Cultivating Kit (Must be used with 31-0178 adapter) Kit Includes:
"V"-Bar Frame, 4-Point Cultivating
Tines, Hiller/Furrower, Depth Gauge
Wheels (Pair).

31-0145 Depth Stake Cultivating Kit (Must be used with 31-0178 adapter) Kit Includes: 8" Furrower Opener, 15" Sweep Cultivator, 32" Leveling Rake, Extra Depth Stake.

31-0178 Adapter

To use these attachments on the tiller, it is necessary to:

1. Remove the tine shield flap assembly.
2. Remove the depth bar assembly (except when using the 8" furrower opener).

Note: Attachments are available through your local dealer or from the factory: Agri-Fab Inc., 303 W. Raymond Street, Sullivan, Illinois 61951 (217) 728-4334.

PARTS INFORMATION

POWER EQUIPMENT PARTS AND SERVICE

Parts and service are available through the authorized service firms listed below. All orders should specify the model number of your unit, part numbers, description of parts and the quantity of each part required.

NOTE: If any parts are found to be missing or defective upon assembly of this unit, write to advise the factory so that immediate replacement can be made.

ALABAMA	BIRMINGHAM
Auto Electric & Carburetor Co.	2625 4th Ave. S. 35233
ARKANSAS	NORTH LITTLE ROCK
Sutton's Lawn Mower Shop	5301 Roundtop Drive Box 368, Rt. 4 72117
CALIFORNIA	PORTERVILLE
Billious	75 North D Street 93257
COLORADO	DENVER
Spitzer Industrial Products Co.	6601 N. Washington St. 80229
FLORIDA	JACKSONVILLE
Radco Distributors	4909 Victor St. Box 5459 32207
	HIALEAH
Small Eng. Dist.	7995 W. 26th Court 33016
GEORGIA	EAST POINT
East Point Cycle & Key Inc.	2834 Church St. 30344
ILLINOIS	LYONS
Keen Edge Co.	8615 Ogden Ave. 60534
INDIANA	ELKHART
Parts & Sales Inc.	2101 Industrial Pkwy. 46516
IOWA	DUBUQUE
Power Lawn & Garden Equip.	2551 J.F. Kennedy 52001
LOUISIANA	NEW ORLEANS
Suhren Engine Co.	8330 Earhart Blvd. 70118
MARYLAND	TAKOMA PARK
Center Supply Co.	6867 New Hampshire Ave. 20912
MASSACHUSETTS	SPRINGFIELD
Morton B. Collins Co.	300 Birnie Ave. 01107
MICHIGAN	LANSING
Lorenz Service Co.	2500 S. Pennsylvania 48910
	MOUNT CLEMENS
Power Equipment Dist.	340 Hubbard 48043
MINNESOTA	HOPKINS
Hance Distributing Inc.	420 Excelsior Ave. W. 55343
MISSOURI	KANSAS CITY
Automotive Equip. Service	3117 Holmes St. 64109
	ST. JOSEPH
Ross-Frazer Supply Co.	8th and Monterey 64503
	ST. LOUIS
Henzler, Inc.	2015 Lemay Ferry Rd. 63125
NEW JERSEY	BELLMAWR
Lawnmower Parts Inc.	717 Creek Rd. 08030
NEW MEXICO	ALBUQUERQUE
Spitzer Eng. & Parts Co.	1023 Third Ave. N.W. 87103
NEW YORK	CARTHAGE
Gamble Dist., Inc.	West End Ave. 13619

BRIGGS AND STRATTON, TECUMSEH AND PEERLESS PARTS AND SERVICE

Briggs & Stratton, Tecumseh and Peerless parts and service should be handled by your nearest authorized engine service firm. Check the yellow pages of your telephone directory under the listing **Engines—Gasoline**, Briggs & Stratton or Tecumseh Lauson.

NORTH CAROLINA	GOLDSBORO
Smith Hardware Co.	515 N. George St. 27530
GREENSBORO	335 N. Green 27402
Dixie Sales Company	
OHIO	CARROLL
Stebe's Mid-State Mower Supply	Box 366, 71 High St. 43112
	CLEVELAND
Bleckrie, Inc.	7900 Lorain Ave. 44102
	WADSWORTH
National Central	687 Seville Rd. 44281
	YOUNGSTOWN
Burton Supply Co.	1301 Logan Ave. Box 929 44501
OKLAHOMA	MUSKOGEE
Victory Motors, Inc.	605 S. Cherokee 74401
OREGON	PORTLAND
Kenton Supply Co.	8216 N. Denver Ave. 97217
PENNSYLVANIA	HARRISBURG
EECO Inc.	4021 N. 6th St. 17110
	WILLOW GROVE
Thompson Rubber Co.	850 Davisville Rd. 19090
	PITTSBURGH
Bluemont Co.	11125 Frankstown Rd. 15235
	PUNXSUTAWNEY
Frank Roberts & Sons	R.D. 2 15767
	SCRANTON
Scranton Auto Ignition Co.	1133-35 Wyoming Ave. 18509
TENNESSEE	KNOXVILLE
Ace Distributors	2103 Magnolia 37919
	MEMPHIS
American Sales & Service, Inc.	3035-43 Bellbrook 38116
TEXAS	DALLAS
Marr Brothers, Inc.	423 E. Jefferson 75203
	FORT WORTH
Woodson Sales Corp.	6733 Baker Blvd. Hwy. 10 76118
	HOUSTON
Bullard Supply Co.	2409 Commerce St. 77003
	SAN ANTONIO
Engine House Inc.	8610 Botts Lane P.O. Box 17867 78217
UTAH	SALT LAKE CITY
Powered Products	1661 N. Beck St. 84116
VIRGINIA	ASHLAND
RBI Corp.	101 Cedar Ridge Dr. 23005
WASHINGTON	SEATTLE
Equip. Northwest	1410 14th Ave. 98122
WISCONSIN	MILWAUKEE
Wisconsin Magneto Inc.	4727 N. Teutonia St. 53209

WARRANTY PARTS AND SERVICE POLICY

(0685)

The purpose of warranty is to protect the customer from defects in workmanship and materials, defects which are NOT detected at the time of manufacture. It does not provide for the unlimited and unrestricted replacement of parts. Use and maintenance are the responsibility of the customer. The manufacturer cannot assume responsibility for conditions over which it has no control. Simply put, if it's the manufacturer's fault, it's the manufacturer's responsibility; if it's the customer's fault, it's the customer's responsibility.

CLAIMS AGAINST THE MANUFACTURER'S WARRANTY INCLUDES:

1. Replacement of Missing Parts on new equipment
2. Replacement of Defective Parts within the warranty period.
3. Repair of Defects within the warranty period.

All claims MUST be substantiated with the following information:

1. Model Number of unit involved.
2. Date unit was purchased or first put into service.
3. Date of failure.
4. Nature of failure.